

Solve for  $x$ .

23.  $\log_7 x = \log_7 4 + \log_7 3 - \log_7 2$  \_\_\_\_\_

24.  $\log_3 x = 4 \log_3 2 + \log_3 5 - \log_3 4$  \_\_\_\_\_

25.  $\log_5 x = \frac{1}{2} \log_5 9 + \log_5(x - 1)$  \_\_\_\_\_

26.  $\log_6(x - 4) - \log_6 3 = \log_6 2$  \_\_\_\_\_

27.  $\log_7 3x^2 = 2 \log_7 24 - \log_7 3$  \_\_\_\_\_

28.  $2 \log_m(x + 1) - \log_m 4 = 0$  \_\_\_\_\_

Solve each equation.

33.  $\log_a x = 2 \log_a 3 + \log_a 5$

34.  $\log_a x = \frac{3}{2} \log_a 9 + \log_a 2$

35.  $\log_b(x + 3) = \log_b 8 - \log_b 2$

36.  $\log_b(x^2 + 7) = \frac{2}{3} \log_b 64$

37.  $\log_a x - \log_a(x - 5) = \log_a 6$

38.  $\log_a(3x + 5) - \log_a(x - 5) = \log_a 8$

39.  $\log_2(x^2 - 9) = 4$

40.  $\log_3(x + 2) + \log_3 6 = 3$